



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,811	10/20/2003	Takeshi Ono	2003_1458A	2618
513	7590	01/09/2008	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P.			WEINSTEIN, LEONARD J	
2033 K STREET N. W.			ART UNIT	PAPER NUMBER
SUITE 800			3746	
WASHINGTON, DC 20006-1021			MAIL DATE	DELIVERY MODE
			01/09/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/687,811	ONO ET AL.
	Examiner	Art Unit
	Leonard J. Weinstein	3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 23 October 2007.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 13-32 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 13-32 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_

5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

1. This office action is in response to the amendment of October 23, 2007. In making the below rejections and/or objections the examiner has considered and addressed each of the applicant's arguments.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Park JP - 2001248555, reference numbers herein taken from the US patent Park US 6,422,833. Park teaches all the limitations for a hermetically sealed compressor including: (claim 1) a compressor element 30 elastically supported in an enclosed container 10 a cup-shaped stopper 50 fixed to an inner upper part of said enclosed container 10, said cup-shaped stopper 50 having a curved protrusion 60 extending inwardly from an inner peripheral surface, as defined by the surface formed on the inside of outer vertical wall spatially located between elements 60 and 61, of said cup-shaped stopper a crankshaft 23 associated with said compressor element 30, with an upper end portion, top section of element 23, of said crankshaft 23 extending into said cup-shaped stopper 50, and being spaced from said inner peripheral surface 51 of said cup-shaped stopper 50 with no structure existing between said upper end portion, top section of element 23, and said inner peripheral surface 51, such that said upper end portion, top section of element 23, of said crank shaft 23 is designed to contact said inner peripheral surface

51 upon oscillation of said compressor element 30 (col. 2 ll. 35-39), and a motor element 20 for driving said compressor element 30.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 14-17, 19-20, 22-24, 26-27, and 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Park JP - 2001248555, reference numbers herein taken from the US patent Park US 6,422,833, in view of Tarlton US 2,141,053. Park teaches all the limitations as discussed but fails to teach the following limitations for a compressor that are taught by Tarlton: (claim 14) a curved protrusion (fig. 4 – examiner comment 7) having an apex (fig. 2 and 4 – examiner comment 3) and flanks (fig. 2 and 4 – examiner comment 4) on opposite sides of said apex, with said flanks (fig. 2 and 4 – examiner comment 4) each have a radius of curvature (fig. 2 – examiner comment 5) such that a center (fig. 2 – examiner comment 6) of the radius of curvature is positioned outside of said cup-shaped stopper 74; (claims 15 and 22)

further in figures 2 and 4, Tarleton teaches flanks that are generally symmetrical relative to one another about an apex (fig. 2 and 4 – examiner comment 3); (claims 16, 19, 23, 26) a cup-shaped stopper 74 comprises a ring member 88, and said curved protrusion (fig. 2 and 4 – examiner comment 7) is formed by deforming an outer peripheral portion (fig. 4 – examiner comment 8) of said ring member 88 such that a resulting deformation of an inner peripheral portion of said ring member corresponds to said curved protrusion (fig. 2 and 4 – examiner comment 7); (claims 17, 20, 24, 27, 29) and figure 4 teaches a curved protrusion (fig. 2 and 4 – examiner comment 3) that extends along an axial direction of said cup-shaped stopper 74. It would have been obvious to one of ordinary skill in the art to modify a stopper to have an apex and flanks extending along an axial direction of a crankshaft in order to provide a shielding protrusion helps provide a quiet operation and reduction in wear to components (Tarlton – pg. 1 col. 1 ll. 41-48).

A copy of the figures with reference to Tarlton and the examiner's comments is provided on page following item 8 of this office action.

7. Claims 18, 21, 25, 28, and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park JP - 2001248555, reference numbers herein taken from the US patent Park US 6,422,833, in view of Tarlton US 2,141,053, as evidenced by Suzuki et al. 3,664,771. A combination of the reference as claimed teaches the invention as discussed including a teaching of the following limitations by the primary reference (Park) including: (claims 18, 21, 25, 28, and 30-31) a compressor element 30 including a compressor chamber 31a and a piston 32 for reciprocating within said compressor chamber 31a in back and forth directions. Further Tarlton teaches a compressor element 54 including (claims 18, 21, 25, 28, and 30-31) a compressor chamber 60 and a compressing member 60 for a movement resulting in a fluid compression,

within said compressor chamber 60 in back and forth directions and a curved protrusion (fig. 4 – examiner comment 7) extends generally orthogonal to the back and forth directions. A combination of Park and Tarlton would teach the limitation of a curved protrusion extending in a direction orthogonal to a back and forth motion of a reciprocating piston. Suzuki teaches a protrusion 117 formed in a cup shaped stopper 16 receiving a crankshaft 7, extending in a direction orthogonal to a back and forth motion of a piston 12 in a hermetically sealed compressor 1 for the purposes of reducing the occurrence of a compressor body shaking against an inner wall of a compressor casing (Suzuki – col. 1 ll. 70- col. 2 ll. 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a protrusion in a stopper for a compressor to reduce the occurrence of a compressor body striking against an inner wall of a casing of compressor in order to prevent damage to a compressor during normal operation (Suzuki – col. 1 ll. 70- col. 2 ll. 2).

8. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park JP - 2001248555, reference numbers herein taken from the US patent Park US 6,422,833, in view of Tarlton US 2,141,053, further in view of Suzuki et al. 3,664,771. A combination of the references teaches all the limitations as discussed but a modification to Park that incorporates the protrusion of Tarlton does not explicitly teach the following limitation that is taught by Suzuki having a inner peripheral surface, inner surface of element 116, of a cup-shaped member 116, wherein a protrusion 117 is disposed, comprises an innermost peripheral surface, as shown in figure 4, of said cup-shaped stopper 116. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a protrusion to be disposed on the innermost surface of a stopper to reduce the occurrence of a compressor body

striking against an inner wall of a casing of compressor in order to prevent damage to a compressor during normal operation (Suzuki – col. 1 ll. 70- col. 2 ll. 2).

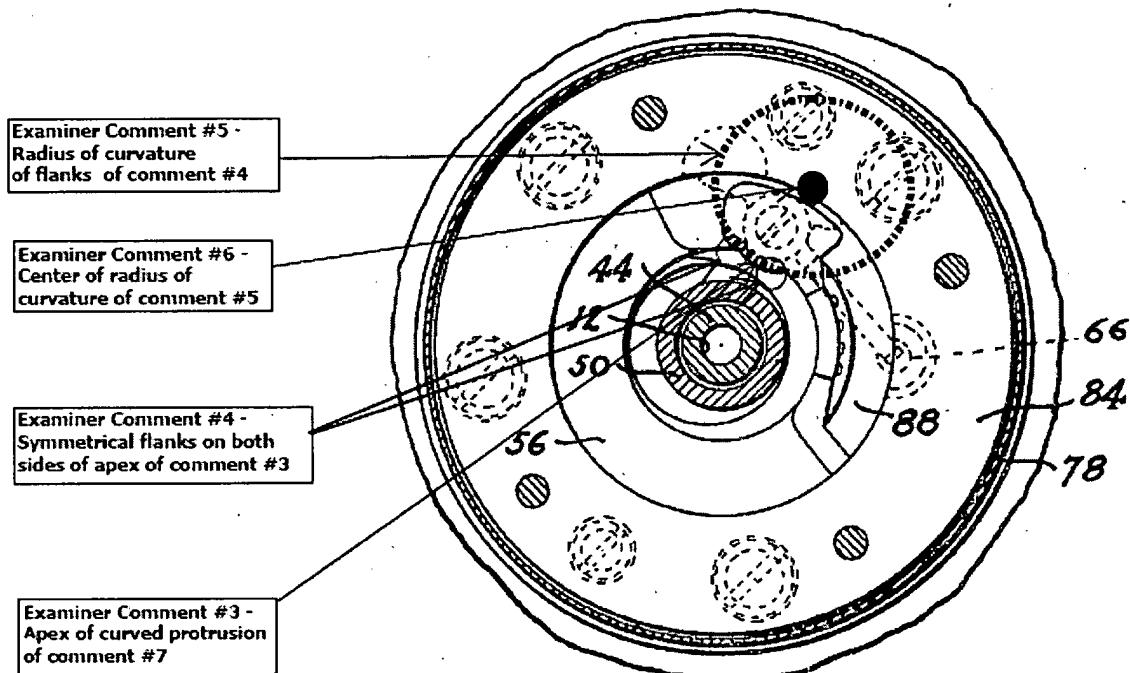
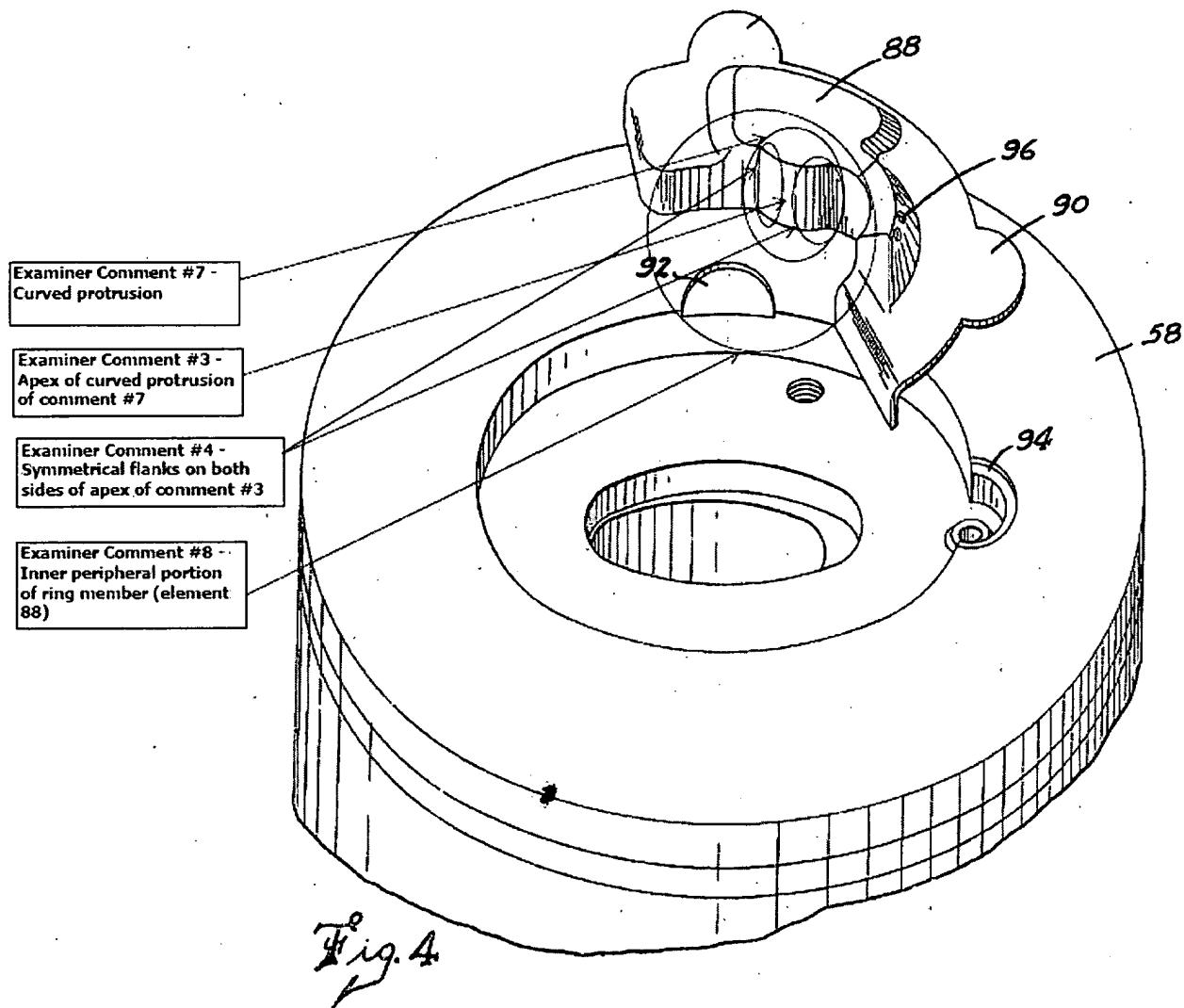


Fig. 2



***Response to Arguments***

9. Applicant's arguments with respect to claims 13-31 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard J. Weinstein whose telephone number is (571) 272-9961. The examiner can normally be reached on Monday - Thursday 7:00 - 5:30.

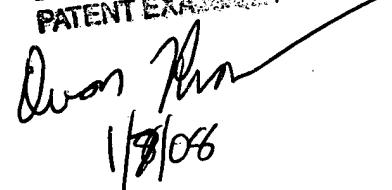
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Karmer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LJW

DEVON C. KRUEGER  
PATENT EXAMINER



Devon C. Krueger  
1/8/06